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ABSTRACT

A study, involving four developmentally disabled children who exhibited a variety of disruptive behaviors such as self-injury and tantrums, was conducted to assess the influence of task demands and adult attention on children's behaviors. The three experimental conditions were the "EASY 100" which consisted of an easy task on which children could comply with 100% correct responses with 1-to-1 adult attention, the "DIFFICULT 100" involving a more difficult task and the same adult attention, and the "EASY 33" with only 1/3 of the adult attention. Two of the children were most disruptive with the "DIFFICULT 100" condition, one child was most disruptive when demands were increased (DIFFICULT 100) and when attention was withdrawn (EASY 33), and another child was most disruptive during the "EASY 33" condition. Results suggested that the disruptive behaviors served social-communicative functions. When Ss were trained to respond with verbally appropriate responses (such as "Am I doing good work," to get attention), disruptive behavior was virtually eliminated. Implications of the findings were considered. Graphs of behavior under various conditions are offered. (SW)

DIFFERENTIAL REINFORCEMENT OF COMMUNICATIVE BEHAVIORS (DRC): AN INTERVENTION FOR THE DISRUPTIVE BEHAVIORS OF DEVELOPMENTALLY DISABLED CHILDREN

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Differential Reinforcement of Communicative Behavior (DRC): An Intervention for the Disruptive Behaviors of Developmentally Disabled Children

This morning I will be presenting one in a series of studies being conducted at the State University of New York at Stony Brook, investigating the functional significance of disruptive behaviors. In addition to these analyses, a new approach to the treatment of these behaviors - what we are calling DIFFERENTIAL REINFORCEMENT OF COMMUNICATIVE BEHAVIOR - will be discussed.

Figure 1 represents the data from the functional analysis. Four developmentallly disabled children who exhibited a variety of disruptive behaviors (e.g., aggression, self-injury, tantrums) served as subjects. Three experimental conditions were constructed in order to assess the influence of task demands and adult attention on the children's behaviors. EASY 100 served as baseline and consisted of an easy task on which the children could comply with 100% correct responses (EASY 100). In addition, each child received 1-to-1 adult attention (EASY 100). The DIFFICULT 100 condition involved a more difficult task (approx. 25% correct responding) with, again, 1-to-1 attention. This served to assess for increased task difficulty. The EASY 33 condition involved the same easy task as EASY 100, but with only 1/3 of the adult attention. This condition served to assess for the withdrawal of attention.

The results of the functional analysis show the children's idiosyncratic responding. Two of the children (Andrew and Anita)

were disruptive most frequently with increased task demands (DIFFICULT 100). Charles was most disruptive when adult attention was withdrawn (EASY 33). Toni's disruptive behaviors appeared to serve multiple functions. She was disruptive both when demands were increased (DIFFICULT 100) and when attention was withdrawn (EASY 33). The disruptive behaviors for these children appeared to be either attention-getting or escape motivated.

The results suggest that the disruptive behaviors of these children served social-communicative functions (i.e., "I want attention." or "This is too hard."). This suggests that if we provided the children with functionally equivalent behaviors, the disruptive behaviors should be reduced. Disruption should become less effective at obtaining the reinforcers (attention and/or decreased demands) than the new, functionally equivalent behaviors.

Since these disruptive behaviors appeared to serve communicative functions for the children, it was felt that appropriate verbal equivalents would be logical alternative responses. Figure 2 represents the data from such an intervention. To use Andrew as an example, baseline for this child consisted of the DIFFICULT 100 condition from the previous functional analysis. Following baseline, Andrew was taught a functionally inappropriate response, "Am I doing good work?". Since this was followed by increased attention, but no subsequent reduction in task difficulty, it was hypothesized that this would have no effect on his disruptive behavior. The results support this hypothesis. Following a second baseline condition, Andrew was trained to respond "I don't understand.", whenever he was incorrect on the

task. This response was always followed by prompts, which presumably led to a decrease in the difficulty of the task. As expected, this intervention resulted in the reduction of Andrew's disruptive behaviors.

This type of intervention was carried out for all of the participants. The appropriate response for the escape motivated children was, "I don't understand". This was always followed by prompts from the experimenter. The appropriate response for the attention-motivated children was, "Am I doing good work?", which was followed by increased adult attention. When the children were trained to respond with the verbal equivalent, disruptive behavior was virtually eliminated for each child.

There are several implications of these data. The first implication deals with the traditional delineation of disruptive behaviors along topographical lines. Typically, aggressive behaviors have been examined as distinct responses, as have self-injury, tantrums, etc. What the functional analysis and subsequent intervention suggests, however, is that a more important distinction is one of <u>function</u> rather than <u>topography</u>. In this study, it was more important for treatment to know that a specific behavior was attention-getting or escape motivated, rather than if it was self-injurious or aggressive.

A second implication involves the structure of disruptive behavior. Having analyzed the functions of the disruptive behaviors in each child, we were able to create a new behavior (i.e., the verbal equivalent) which now served as a member of the same functional response

class. This enabled us to manipulate the one appropriate response in the response class in such a way as to reduce the frequency of the other members of the response class (i.e., the disruptive behaviors). This was an appropriate and very powerful demonstration of response generalization. We were able to reduce the disruptive behaviors without a direct intervention. This may prove important, especially where paraprofessional training is problematic.

The final implication from this study involves the communicative functions of non-verbal behaviors. Developmental psychologists have long recognized that non-verbal behaviors such as crying and hitting in young children are primitive forms of communication. And, indeed, those who work with highly disruptive individuals have often interpreted these behaviors as an effort to communicate. As such, our conceptualization of these behaviors is not a new one. However, what we have brought to bear on this notion of disruption as communication are two strategies. The first is a technology for assessing the functions of the behaviors. This was an essential prerequisite to the intervention. Secondly, what we taught to the children were specific communication strategies rather than general communication strategies. Instead of attempting to improved the communicative abilities of the children in general, we sought out specific responses which would serve as functionally equivalent behaviors.

In conclusion, let me just say that we have replicated the effects of this intervention. We have data from three additional children showing that this procedure can be instituted in a classroom and the effects have been maintained for over four months. We

will continue to follow up these children over the next year. And, currently ongoing is a project assessing the extent of stimulus generalization for this procedure.

We feel that the DRC procedure just presented is a very promising new approach to the treatment of all types of disruptive behaviors. We are continuing to follow this line of research, and we hope that our procedures can be employed more widely in the future.

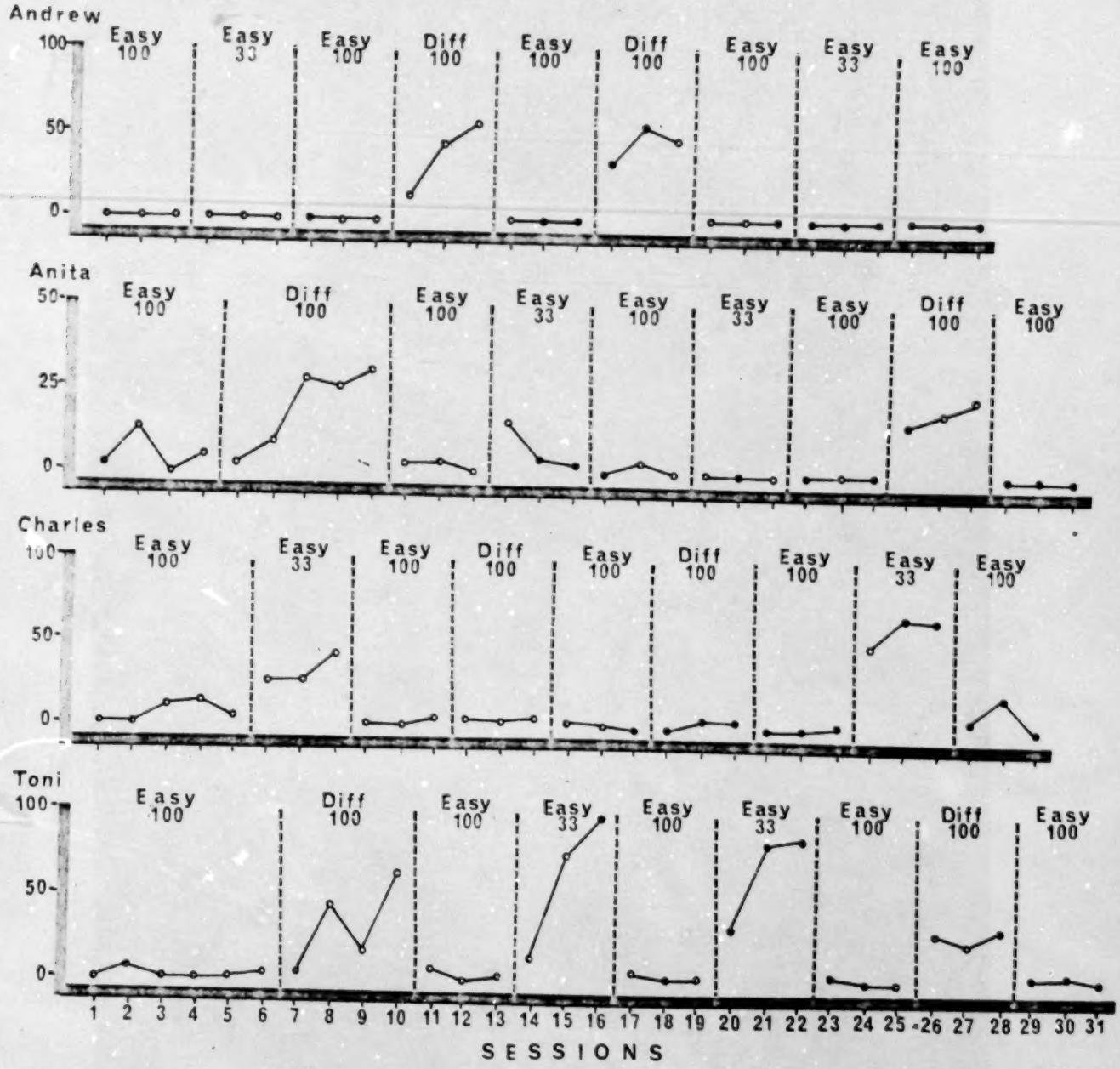
Andrew
Anita
Charles
Toni
Easy 100
Easy 33
Diff 100
100
50
25
0
PERCENT OF INTERVALS DISRUPTIVE BEHAVIOR
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
SESSIONS

Figure 1

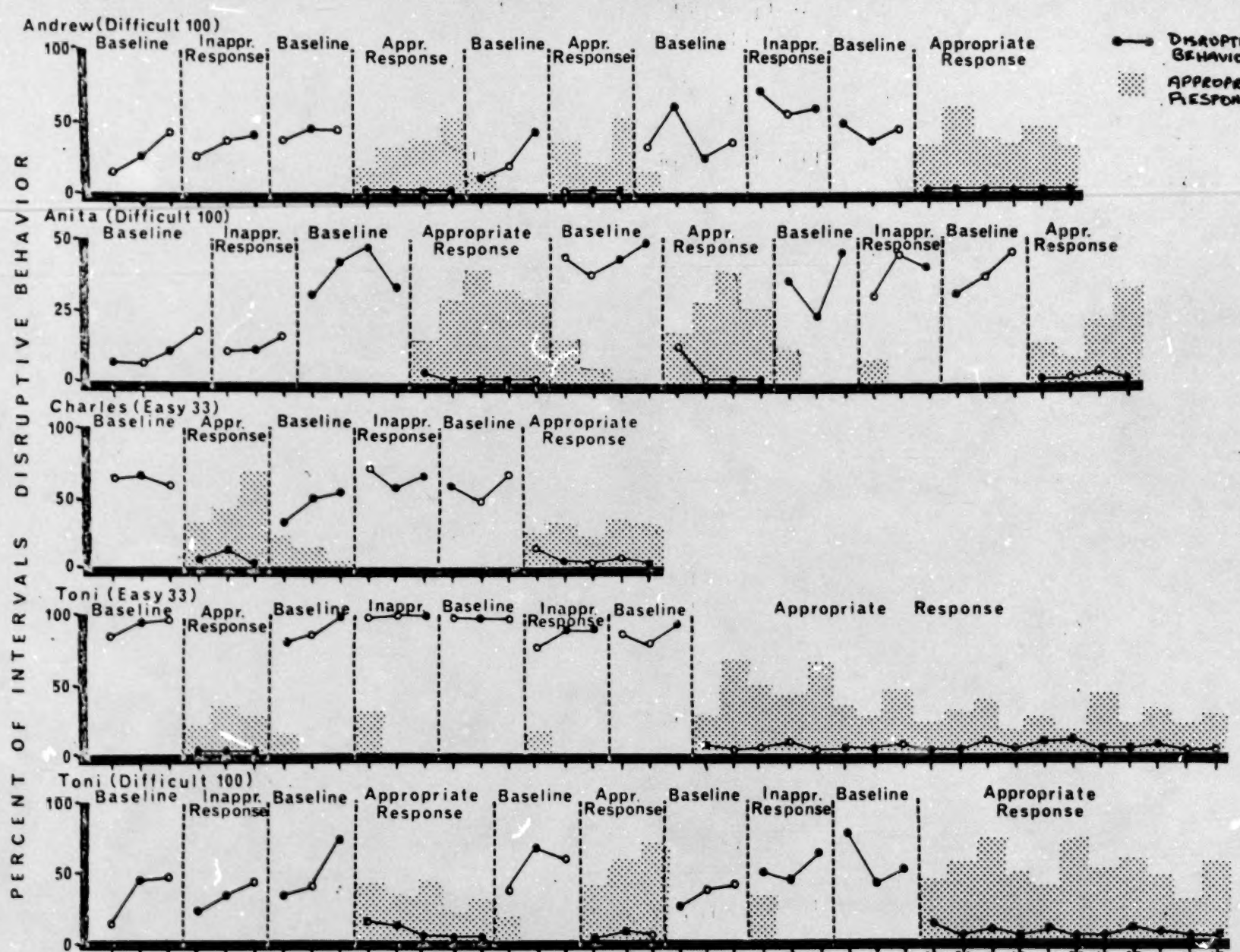
Andrew (Difficult 100)
Baseline
Inappr. Response
Appr. Response
Anita (Difficult 100)
Appropriate Response
Charles (Easy 33)
Toni (Easy 33)
Toni (Difficult 100)
DISRUPTIVE BEHAVIOR
APPROPRIATE RESPONSE
PERCENT OF INTERVALS
SESSIONS

Figure 2